UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,303	01/29/2004	Ozgur C. Leonard	15437-0602	6314

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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/768,303	LEONARD ET AL.
		Examiner	Art Unit
		ERIC C. WAI	2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 January 2009</u>.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-8,10-19,21-30,32 and 33</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-8,10-19,21-30,32 and 33</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
   1.☐ Certified copies of the priority documents have been received.
   2.☐ Certified copies of the priority documents have been received in Application No. _____.
   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>03/19, 1/20/09, 10/23, 10/27/08</u>.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-8, 10-19, 21-30, and 32-33 are presented for examination.

Claim Objections

2.   Claims 12-19, and 21-22 are objected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter. The claims are directed to a signal

directly or indirectly by claiming a medium and the Specification ([0044]) recites

evidence where the machine-readable storage medium is define as a "wave" (such as a

carrier wave). In that event, the claims are directed to a form of energy which at present

the office feels does not fall into a category of invention. The following link on the World

Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35

U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.

pdf>

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claim 1-8, 10-19, 21-30, and 32-33 are rejected under 35 U.S.C. 112, first

paragraph, as failing to comply with the enablement requirement. The claim(s) contains

subject matter which was not described in the specification in such a way as to enable

one skilled in the art to which it pertains, or with which it is most nearly connected, to

make and/or use the invention.

5.   Claims 1, 12, and 23 recite changing the association of resource pools is

performed "without terminating and restarting the processes". While the disclosure

provides proper support for changing resource pool associations, no mention is made

that such actions are performed without terminating and restarting of processes.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-8, 10-19, 21-30, and 32-33 rejected under 35 U.S.C. 103(a) as being

unpatentable over Berger et al. (US PG Pub No. US 2003/0014466 A1) in view of

Armstrong et al. (US PG Pub No. US 2002/0156824 A1), further in view of Midgley (US

PG Pub No. US 2006/0168224 A1).

8.   Armstrong was disclosed in IDS dated 9/29/2005. Berger was disclosed in IDS

dated 04/23/2008.

9.   Regarding claim 1, Berger teaches a machine-implemented method, comprising:

establishing a plurality of non-global operating system partitions within a global

operating system environment provided by the operating system, wherein each non-

global operating system partition serves to isolate processes running within that non-

global operating system partition from other non-global operating system partitions

within the global operating system environment, wherein enforcement of boundaries

between the non-global operating system partitions is carried out by the operating

system, and wherein the plurality of non-global operating system partitions comprises a

particular non-global operating system partition ([0035] lines 9-14, wherein an operating

system sets up logically protected computing environments or compartments);

ensuring that processes running within the particular non-global operating system

partition are allowed to utilize only the resources assigned to that partition ([0035] lines

20-22).

10.   Berger does not explicitly teach associating the particular non-global operating

system partition with a first resource pool comprising one or more resources. Armstrong

teaches the use of processor resource pools in logically partitioned system ([0011-

0012]). It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Berger to include processor resource pools. Since Berger only

discloses methods to assign network resources, one would be motivated by the desire

to include a way of assigning each compartment in Berger to a processor resource pool.

11.   Berger and Armstrong teach: receiving a request to change the resource pool

association for the particular non-global operating system partition to associate the

particular non-global operating system partition with a second resource pool instead of

the first resource pool, wherein the second resource pool is a different resource pool

from the first resource pool, and wherein the second resource pool comprises one or

more resources (Armstrong [0009], wherein resources can be reallocated according to a

user);

        changing the resource pool association for the particular non-global operating

system partition to cause the particular non-global operating system partition to be

associated with the second resource pool instead of the first resource pool (Armstrong

[0009], wherein resources can be reallocated); and

        ensuring that the processes running within the particular non-global operating

system partition are allowed to utilize only the resources in the second resource pool

(Berger [0035] lines 20-22 and Armstrong [0010]).

12.   Berger and Armstrong do not teach that changing the resource pool associations

is performed without terminating and restarting the processes running within the

particular non-global operating system partition.

13.   Midgley teaches a method of allocated resources from a server pool without the

need to restart the server ([0006]). Midgley teaches that such methods reduce the

amount of downtime encountered in a server environment ([0003]). It would have been

obvious to one of ordinary skill in the art to allow for changes in resource associations to

be performed without terminating and restarting the processes. One would be motivated by the desire to reduce the downtime encountered as taught by Midgley.

14.   Regarding claim 2, Armstrong teaches that the first resource pool comprises one or more processors ([0012]).

15.   Regarding claim 3, Armstrong teaches that ensuring comprises: assigning work from processes running within the particular non-global operating system partition to only the one or more processors in the first resource pool ([0011], wherein each logical partition is constrained to execute in an assigned processor set).

16.   Regarding claim 4, Armstrong teaches that the first resource pool comprises an indication of a maximum amount of memory that can be consumed ([0023]).

17.   Regarding claim 5, Berger, Armstrong, and Midgley do not explicitly teach that ensuring comprises:

        receiving, from a particular process running within the particular non-global operating system partition, a memory allocation request; determining whether granting the memory allocation request would cause the maximum amount of memory that can be consumed to be exceeded; and in response to a determination that granting the memory allocation request would not cause the maximum amount of memory that can be consumed to be exceeded, granting the memory allocation request.

18.   However, it is old and well known that operating system manage memory allocation requests and grant them accordingly. It would have been obvious to one of ordinary skill in the art to modify Berger and Armstrong to explicitly teach memory management.

19.   Regarding claim 6, Berger, Armstrong, and Midgley do not explicitly teach ensuring further comprises: in response to a determination that granting the memory allocation request would cause the maximum amount of memory that can be consumed to be exceeded, deallocating sufficient memory from one or more other processes to enable the memory allocation request to be granted without causing the maximum amount of memory that can be consumed to be exceeded; and granting the memory allocation request.

20.   It is old and well known that OS can reallocate resources to ensure the efficient management of resources such as when a high priority process has an urgent processing target that needs to be met. It would have been obvious to one of ordinary skill in the art at the time of the invention to deallocate sufficient memory from one or more other processes to enable the memory allocation request to be granted without causing the maximum amount of memory that can be consumed to be exceeded and granting the memory allocation request. One would be motivated by the desire to ensure that high priority requests are granted.

21.   Regarding claim 7, Berger teaches that the operating system is executed on a

computer system, and wherein the resources in the first resource pool are just a subset

of a total set of resources available on the computer system ([0035] lines 20-26).

22.   Regarding claim 8, Armstrong teaches that ensuring comprises: associating each

process running within the particular non-global operating system partition with the first

resource pool ([0011], wherein each logical partition is constrained to execute in an

assigned processor set).

23.   Regarding claim 10, Armstrong teaches that ensuring that processes running

within the particular non-global operating system partition are allowed to utilize only the

resources in the second resource pool comprises: associating each process running

within the particular non-global partition with the second resource pool instead of the

first resource pool ([0011], wherein each logical partition is constrained to execute in an

assigned processor set).

24.   Regarding claim 11, Berger, Armstrong, and Midgley do not explicitly teach that

the operating system executes on a computer system, and wherein the method further

comprises: prior to receiving the request to change the resource pool association:

receiving, from a particular process running within the particular non-global operating

system partition, a request for information pertaining to all resources; and providing, to

the particular process, information pertaining only to the one or more resources in the

first resource pool, even though the computer system comprises other resources.

25.   Armstrong teaches that each partition is completely separated from each other

([0034]). It would have been obvious to one of ordinary skill in the art at the time of the

invention to provide information pertaining only to the one or more resources in the first

resource pool, even though the computer system comprises other resources. One

would be motivated by the desire to enforce isolation of partitions as indicated by

Armstrong ([0034]).

26.   Regarding claims 12-19, 21-30, and 32-33, they are the machine-readable

medium and apparatus claims of claims 1-8, and 10-11 above. Therefore, they are

rejected for the same reasons as claims 1-8, and 10-11 above.

Response to Arguments

27.   Applicant's arguments with respect to claims 1-8, 10-19, 21-30, and 32-33 have

been considered but are moot in view of the new ground(s) of rejection.

Conclusion

28.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

29.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012.

The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/   /Eric C Wai/
Primary Examiner, Art Unit 2194   Examiner, Art Unit 2195